

We Claim:

1. A light emitting device, comprising:  
a hollow truncated spherical housing, the housing being substantially  
5 transparent; and  
a light source positioned at a center point of a sphere defined by a spherical  
curvature of the housing.
2. The light emitting device of claim 1, wherein the hollow truncated spherical  
housing comprises a hollow hemispherical housing.
- 10 3. The light emitting device of claim 1, where the hollow truncated spherical  
housing comprises a hollow truncated hemispherical housing.
4. The light emitting device of claim 1, wherein the housing is of a substantially  
uniform thickness.
- 15 5. The light emitting device of claim 1, wherein the housing is of a substantially  
uniform thickness of about 1.2 mm.
6. The light emitting device of claim 1, wherein the housing is of a substantially  
uniform thickness and the thickness of the housing ranges from about 1.2 mm to about 12.7  
mm.
- 20 7. The light emitting device of claim 1, wherein the housing terminates in a  
annular surface having an inner diameter of about 3.2 mm.
8. The light emitting device of claim 1, wherein the housing terminates in an  
annular surface having an outer diameter of about 4.4 mm.
9. The light emitting device of claim 1, wherein the housing terminates in an  
annular surface having an outer diameter ranging from about 4.4 mm to about 25.4 mm.

10. The light emitting device of claim 1, wherein the housing terminates in an annular surface wherein the width of the annular surface is about the same as the thickness of the housing.

5 11. The light emitting device of claim 1, wherein the housing comprises a crystalline substance.

12. The light emitting device of claim 1, wherein the housing comprises one of glass, quartz, sapphire, diamond, polymethylmethacrylate, silicone or pyrex glass.

13. The light emitting device of claim 1, wherein the housing comprises a material that is able to withstand autoclave temperatures.

10 14. The light emitting device of claim 1, wherein the light source comprises a solid state light source.

15. The light emitting device of claim 1, wherein the light source comprises a Gallium Arsenide light emitting diode.

15 16. The light emitting device of claim 1, wherein the light source comprises a light emitting diode.

17. The light emitting device of claim 1, wherein the light source comprises an infrared light source.

18. The light emitting device of claim 1, wherein the light source comprise an incandescent light source.

20 19. The light emitting device of claim 1, wherein the light source comprises a laser light source.

20 20. The light emitting device of claim 1, further including a reflective surface, wherein the light source is disposed between the housing and the reflective surface.

21. The light emitting device of claim 20, wherein the reflective surface comprises a gold coated surface.

22. The light emitting device of claim 1, wherein the housing sits on a housing base.

5 23. The light emitting device of claim 22, wherein the housing base comprises a hollow cylindrical body having an upper end and a lower end, wherein the upper end terminates in an inwardly extending flange.

24. A light emitting device, comprising:  
a hollow truncated spherical housing having an inner surface and an outer surface, the housing being substantially transparent; and  
a light source for generating a plurality of light rays, the light source being  
5 positioned with respect to the housing to minimize an angle of incidence associated with each of the plurality of light rays as they intersect the inner surface of the housing.

25. The light emitting device of claim 24, wherein the hollow truncated spherical housing comprises a hollow hemispherical housing.

10 26. The light emitting device of claim 24, where the hollow truncated spherical housing comprises a hollow truncated hemispherical housing.

27. The light emitting device of claim 24, wherein the housing is of a substantially uniform thickness.

15 28. The light emitting device of claim 24, wherein the housing is of a substantially uniform thickness of about 1.2 mm.

29. The light emitting device of claim 24, wherein the housing is of a substantially uniform thickness and the thickness of the housing ranges from about 1.2 mm to about 12.7 mm.

20 30. The light emitting device of claim 24, wherein the housing terminates in a annular surface having an inner diameter of about 3.2 mm.

31. The light emitting device of claim 24, wherein the housing terminates in an annular surface having an outer diameter of about 4.4 mm.

32. The light emitting device of claim 24, wherein the housing terminates in an annular surface having an outer diameter ranging from about 4.4 mm to about 25.4 mm.

33. The light emitting device of claim 24, wherein the housing terminates in an annular surface wherein the width of the annular surface is about the same as the thickness of the housing.

5 34. The light emitting device of claim 24, wherein the housing comprises a crystalline substance.

35. The light emitting device of claim 24, wherein the housing comprises one of glass, quartz, sapphire, diamond, polymethylmethacrylate, silicone or pyrex glass.

36. The light emitting device of claim 24, wherein the housing comprises a material that is able to withstand autoclave temperatures.

10 37. The light emitting device of claim 24, wherein the light source comprises a solid state light source.

38. The light emitting device of claim 24, wherein the light source comprises a Gallium Arsenide light emitting diode.

15 39. The light emitting device of claim 24, wherein the light source comprises a light emitting diode.

40. The light emitting device of claim 24, wherein the light source comprises an infrared light source.

41. The light emitting device of claim 24, wherein the light source comprise an incandescent light source.

20 42. The light emitting device of claim 24, wherein the light source comprises a laser light source.

43. The light emitting device of claim 24, further including a reflective surface, wherein the light source is disposed between the housing and the reflective surface.

44. The light emitting device of claim 43, wherein the reflective surface comprises a gold coated surface.

45. The light emitting device of claim 24, wherein the housing sits on a housing base.

5           46. The light emitting device of claim 45, wherein the housing base comprises a hollow cylindrical body having an upper end and a lower end, wherein the upper end terminates in an inwardly extending flange.